USAID VIETNAM CLEAN ENERGY PROGRAM

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QUARTERLY REPORT, FY 2015 Q3
APRIL 1 – JUNE 30, 2015

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Winrock International Institute for Agricultural Development

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USAID Vietnam Clean Energy Program
Quarterly Report, FY 2015 Q3
April 1 – June 30, 2015

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List of Acronyms

ASHRAE	American Society of Heating, Refrigerating, and Air-conditioning Engineers
COP	Chief of Party
DCOP	Deputy Chief of Party
DOC	Department of Construction
DOIT	Department of Industry and Trade
ECC	Energy Conservation Center
EE	energy efficiency
GAP	Gender action plan
GVN	Government of Vietnam
FSEC	Florida Solar Energy Center
HAU	Hanoi Architecture University
HCMC	Ho Chi Minh City
IES	Integrated Environmental Solutions (software)
IESNA`	Illuminating Engineering Society of North America
M&E	Monitoring and Evaluation
MOC	Ministry of Construction
NUS	National University of Civil Engineering
RE	Renewable energy
RFP	Request for proposals
SEED	Standard Energy Efficiency Data
UCF	University of Central Florida
UCLA	University of California Los Angeles
USAID	United States Agency for International Development
VEEBC	Vietnam Energy Efficiency Building Code
VGBC	Vietnam Green Buildings Council
WI	Winrock International

Introduction

The USAID Vietnam Clean Energy Program is a five-year effort (October 2012 – September 2017) to accelerate Vietnam's transition to climate resilient, low emission sustainable development. The Program focuses on three specific areas:

1. **Component 1 (Sub IR-2.1)** To enhance the Government of Vietnam's capacity to acquire, manage, analyze and use energy sector data in decision making
2. **Component 2 (Sub-IR 2.2)** Increase energy efficiency in the building sector
3. **Component 3 (Sub-IR 3.1)** Increase public and private investment in and piloting of renewable energy technologies[1]

This report presents progress made during the period April 1 – June 30, 2015, or the 3rd quarter of Year 3 of the Program.

Administrative Activities

Submission of reports and work plans

The following reports and work plans were submitted and received approval from the COR during this report quarter (April-June 2015):

- Y3Q2 Report;
- Winrock also communicated to USAID/Vietnam a proposed new format for two key VCEP project indicators. A more formal proposal is being prepared for COR and CO approval.

Development of draft revised LOP work plan and revised Project Document

The following draft documents were developed during this report quarter (April-June 2015):

- Revised LOP Workplan that incorporates support by the Project to MOC in developing and accomplishing a Green Growth Action Plan (GGAP) for the Construction Sector. In-process drafts have been discussed during the 3rd quarter, and a formal request for approval by the WI Home Office was submitted very early in July 2015. Once approved by the WI home office, that plan will then be submitted to the COR for approval.
- A revised Project Document was developed during the 3rd quarter. This revision amends the MOC portion of the Project activities from $3M to about $6.5M and also explains the scope of activities accordingly. During the 3rd quarter, in-process drafts have been distributed to the WI Home Office, to the COR, and to a small working group at MOC. In late May 2015, MOC requested that the revised project document follow the format of the original document as much as possible. Such a draft was developed in detail during June 2015. The draft was provided to the MOC working group during a meeting on July 7, and a formal request for approval by the WI Home Office was submitted in very early July 2015. Once approved by the WI home office, that plan will then be submitted to the COR for approval.

[1] Winrock will focus on Green Growth Action Plans for the construction sector under this component.

Key Meetings

Numerous meetings were held during the quarter, including those with various private sector entities.

- **Meetings with USAID:**
    - **Visit to VCEP Office:** USAID/ESDO Director, Kyung (KC) Choe, visited the VCEP office in Hanoi on 11 May 2015, along with USAID COR Terhi Majanen, Leslie Hamilton, and Tuong Do Duc.
    - **Regular, informal check-in meetings:** These were routinely held between the COP and the COR during the reporting period to discuss Program progress.
- **Meetings with American Institute of Architects (AIA) staff:** Program COP and DCOP held web-meetings with 3 members of AIA staff in Washington DC to discuss the possible development of pilot dual-language seminars as part of The AIA University (AIAU) set of seminars for architects. Such dual-language seminars would increase the availability to Vietnamese speaking audiences of key existing professional training seminars already developed and disseminated online by the AIA. This would expand, at a very low cost, excellent training materials aimed especially at building design professionals. This supports the Project training objectives of raising the level of awareness and capability in Vietnam of energy efficiency and green building design practices**.**
- **Meetings with ASHRAE staff:** The Program COP travelled to US during 1-30 June 2015, participated in hosting the 2nd Study Tour during June 6-21, attended the ASHRAE summer conference during June 26-29, and had additional informal meetings with ASHRAE staff members on several topics including possibly forming an ASHRAE section in Vietnam. ASHRAE is a professional society that is very successful in developing standards, especially energy standards, for building design, construction and operation. Creation of an ASHRAE section in Vietnam would support a project objective of raising the level of awareness among Vietnamese engineers concerning international best practices for energy efficiency standards and design practices.
- **Meetings with LBNL and USDOE Staff on SEED:** The Program COP attended an impromptu meeting in Berkeley with the LBNL and USDOE managers of the SEED program. They were very supportive of our efforts to use SEED (open-source platform) as a basis for a dual-language online data entry and database management system for energy performance of large buildings in major cities in Vietnam.

Technical Activities

Component 1 (Sub-IR 2.1): Enhance capacity to acquire, manage, analyze and use energy sector data in decision making

Almost all activities in Component 1 during the Q3Y3 period occurred within Tasks 1.1.2 and 1.1.3. The various activities that occurred within these two tasks are described below.

Task 1.1.2: Develop National Building Energy Performance Baseline

A specific objective of the VCEP Program is to build a comprehensive **National Database On Building Energy Performance**, which will be used for policy analyses and decision-making, as well as for training and energy simulation purposes.

To do this, it is essential to carry out detailed surveys and collect data on buildings' energy performance.

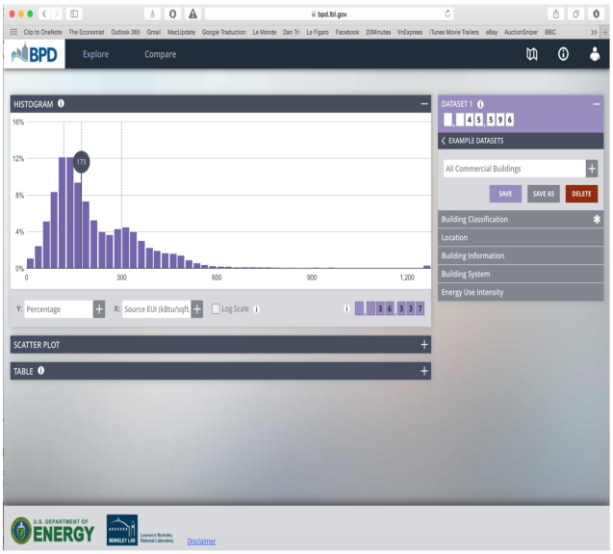


Figure: Snapshot of US National Building Performance Database

Building stock data collection in 5 cities

We classify buildings into 15 categories depending on the buildings' types and sizes. For the moment, the project focuses only on buildings with total floor area of from 2,500m^2 each (within the scope of the Vietnamese Energy Efficiency Building Code – VEEBC). However, there is no official statistics on the quantities of those buildings in each city (the "building stock").

Therefore, the first step of the project's database work is to identify the building stock in each city studied. We have been working with the local Departments of Construction (DOC) of 5 cities including Hanoi, Hai Phong, Da Nang, Ho Chi Minh and Can Tho.

During the first quarter of year 3 we entered into contracts with entities in 4 of the 5 cities and began to collect data. By the end of December 2014, Program was receiving rough preliminary information about data being identified for buildings larger than 2,500m^2 that had been constructed in the past 10 years in 4 cities:

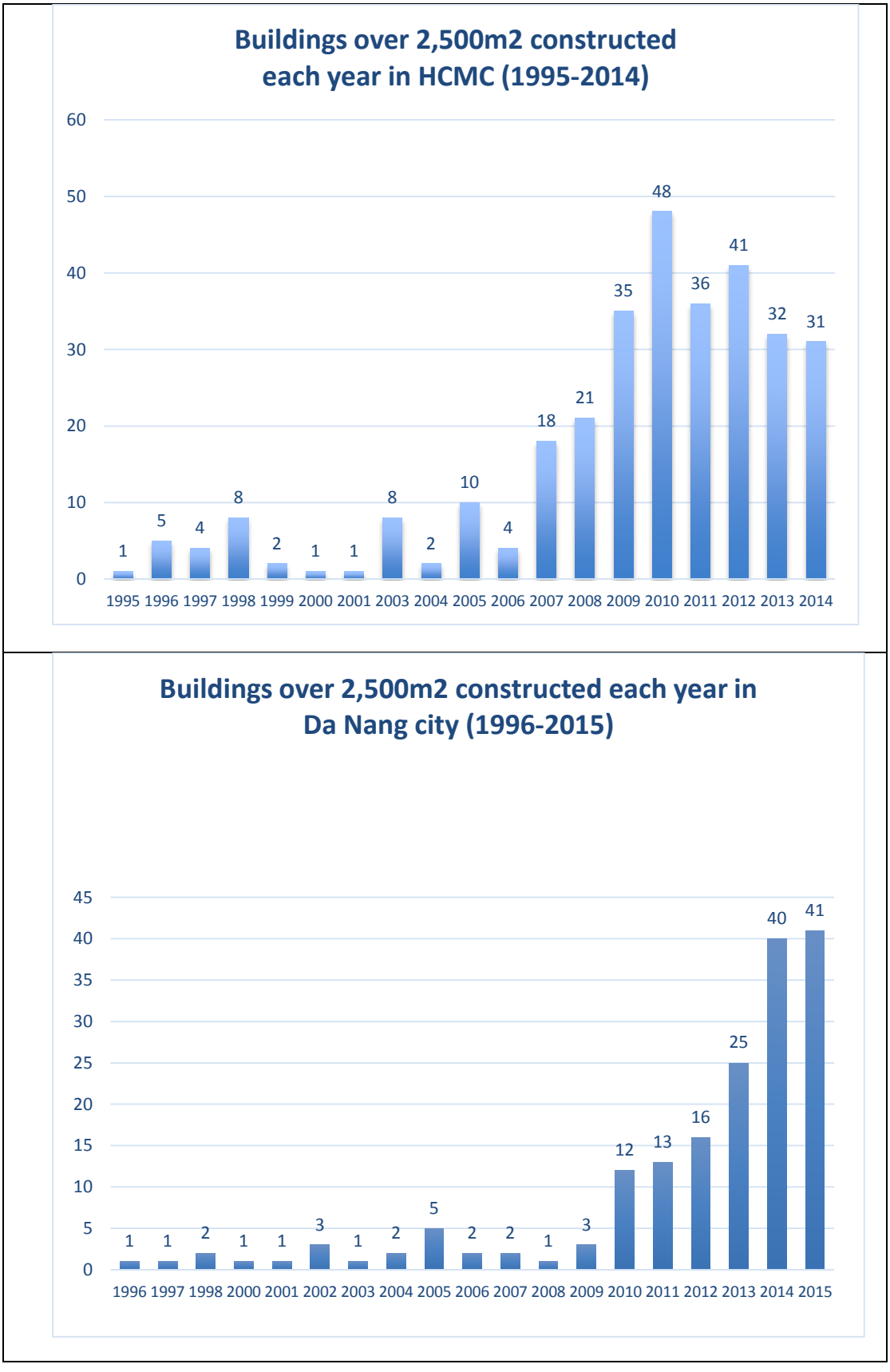
- For HCMC, about 440 to 600 possible buildings.
- For Can Tho, about 40 possible buildings,
- For Danang, some 320 buildings had been identified, but necessary minimum data was being identified for only 120 to 220 buildings, primarily large residential buildings and hotels.
- For Hai Phong, about 40 possible buildings.

The building data to collect in this phase is mostly based on construction permits. However, information is scattered across many different levels of administrative management. In addition, construction documents are in most cases stored in hard copies only, data retrieval and consolidation process needs a lot of time and effort. Therefore, the local DOCs have respectively assigned their designated business entities to sign contracts with Winrock for data collection.

This stock of buildings will serve as basis for selecting representative samples of buildings for detailed energy surveying, a mandatory work in order to generate statistically valid data for the above-mentioned national building energy performance database. The building stock data collection work is now finished for four cities with great success.

Four of the five concerned cities have successfully managed to collect and consolidate data for the building stock. VCEP is now possessed of a stock of more than 1,100 large buildings throughout

Vietnam in all three climate zones (the stock does not include buildings in Hanoi, where the building stock data collection work is still under way).



Detailed building energy performance surveys and Requests for Proposal (RFPs)

We will randomly select about 225-250 buildings for detailed survey (Phase-2, see below).

The survey work starts with 5 cities of Vietnam, including Hanoi, Hai Phong, Da Nang, Ho Chi Minh and Can Tho, representing 3 typical climate zones and territories of the country. For the credibility of collected data, surveyed buildings must be statistically representative for each climate zone and building type/size category.

Therefore, it has been concluded that, for each climate zone, the optimal sample size must contain at least 5 buildings in each of the building categories (at least to 75 buildings/climate zone).

The original plan was that, in each of the three climate zones, a subcontractor, specialized in building energy, selected by a competitive bidding process, would carry out the survey work.

Preparation Activities in previous quarters

During Y3Q1, Requests for Proposals (RFPs) were prepared by Winrock staff in the Hanoi field office, in close communication with Winrock HQ contracts personnel. The RFPs were reviewed and refined several times during Y3Q1 and final drafts for RFPS for two of the three climate zones - the southern zone (HCMC / Can Tho) and the middle zone (Danang) - were submitted to MOC for review at the very end of Y3Q1.

During Y3Q2, the RFPs were published and resulted in the Program obtaining 10 proposals for detailed data collection work for the middle climate zone in Danang, and 8 proposals for detailed data collection work for the southern climate in HCMC / Can Tho.

During Y3Q3, Proposals were evaluated and contractors were selected

During Q3Y3 the 18 proposals were evaluated by a 6-person evaluation team, and contractors were selected for negotiation. The original plan was to select one contractor for each climate zone to – one for the southern zone and another for the middle zone. A third contractor would be selected in the future for the north climate, after the Building Stock data collection for Hanoi would be completed.

The plan was to have each contractor survey some 80 to 100 buildings in each climate zone. However, during the review process it became apparent that the contractors did not have the capacity to survey the desired number of buildings within the desired timeframe, and could survey far fewer buildings.

Thus, to have a more appropriate workload that would avoid delays and survey quality issues, the evaluation team decided to award two contractors within each of the climate regions to do the data surveys.

In response to the competitive bidding process (March to May, 2015), a 3-person Winrock Project team and a 3-person team from the Ministry of Construction's Project Management Board selected the 4 most competent entities to carry out the first surveys, 2 entities for surveying the southern climate zone and 2 entities for surveying the middle climate zone. These entities are all well known and experienced practitioners in the field of energy efficiency in the building sector. The 4 entities selected include:

- For conducting data surveys in the southern climate zone (HCMC / Can Tho):
  - Artelia (Vietnam), a private sector company,
  - The Energy Conservation Center in Ho Chi Minh city (ECCHCM).
- For conducting data surveys in the middle climate zone (Danang):
  - The Institute of Energy Science (IES), under the Vietnam Academy of Science and Technology,
  - The Energy Conservation Center in Da Nang (DECC)

At the end of Y3Q3, final contract negotiations were underway between Winrock and these entities.

The survey work is expected to start Y3Q4 in the summer or early fall of 2015 after training is provided on building energy audits; the survey work is expected to take 4 to 8 months to complete.

Also, later in 2015, after the Building Stock data collection is completed for Hanoi, the Evaluation Team plans to select 2 additional entities to conduct detailed data surveys in the northern climate zone (Hanoi / Hai Phong).

Data collected through these buildings surveys are necessary for establishing statistically valid baselines for current energy performance in each category of buildings. These baselines will serve as starting points for setting energy efficiency improvement goals, as well as comparison points for evaluating future efforts and trending overall energy performance.

Web-based meetings on Data Collection Activities

Regular web-based meetings with DOC representatives from Hai Phong, Danang, Can Tho, Ho Chi Minh City and Hanoi have been carried out to coordinate and collaborate on activities related to the cities.

Task 1.1.3: Improve data management and distribution systems for building energy performance

Once completed, collected data on buildings will serve as inputs for the next phases of developing an Online Building Energy Performance Database.

National Building Energy Performance Database (BEPD)

The collected data will also be the core of the National Building Energy Performance database, which is to be developed with the integration of the US **Standard Energy Efficiency Data (SEED)** Platform. The SEED platform is a software tool that provides a standardized format for collecting, storing and

analyzing energy performance information of large portfolios of buildings and demonstrating the economic and environmental benefits of energy efficiency solutions.

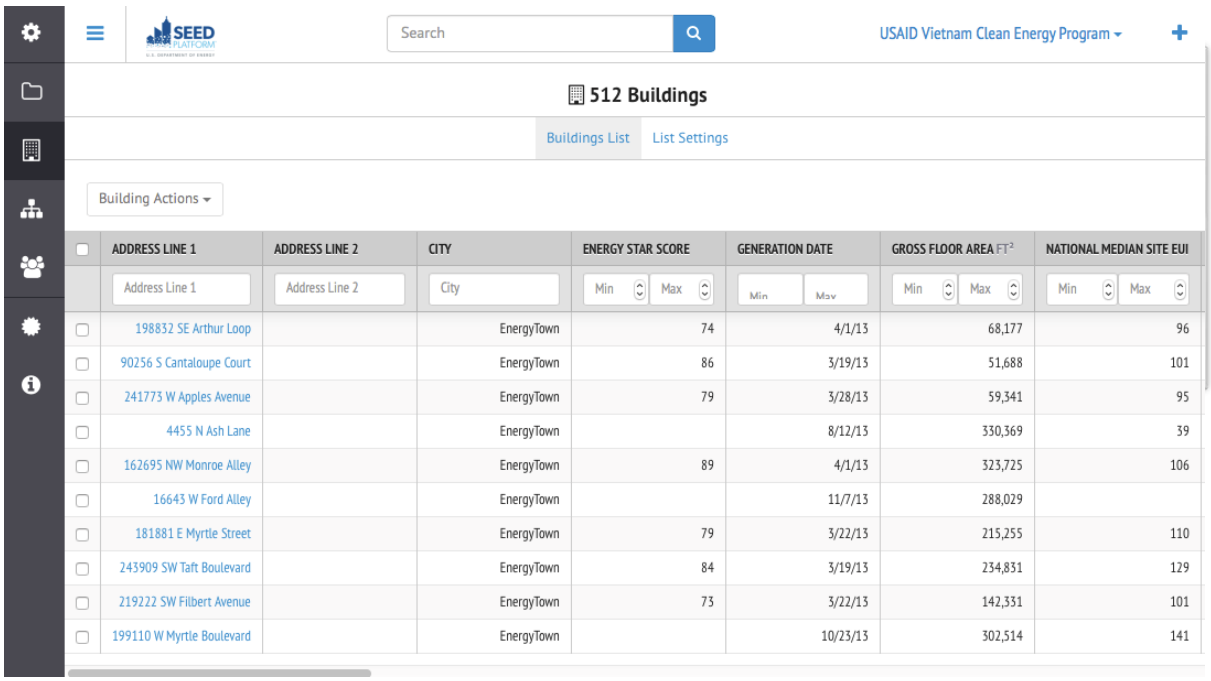


Figure: A screenshot of the Standard Energy Efficiency Data (SEED) platform for storing and managing building data

The National Building Energy Performance Database (BEPD) will:

- Make data management easier
- Be easily used out of the box
- Be able to handle many kinds of data from different sources (MOIT, MOC, Green building certifications, etc.
- Be standard and objective: become common format for storing and sharing energy data across Vietnam.

The BEPD will therefore have multiple layers of organizational management levels and functionalities. Provincial Departments of Construction (DOCs) will be able to access and manage data on all buildings under their respective administrative territories, while the national level the Ministry of Construction can have access to some higher-level, more concentrated building data such as buildings' annual energy consumptions.

The BEPD is being designed to be a useful working tool into the future for MOC and for at least the DOCs in the 5 major cities in Vietnam. If the BEPD is to be successful, it must be perceived as a useful and easy-to-use tool not only by MOC but especially by the DOCs and districts in the 5 major cities who will actually do the data entry and editing of the data for new buildings and retrofits in each of the cities.

The BEPD software will be written as open source software as an expansion of the existing open source SEED software. We envision that the software can be owned by the using organizations, with for the possible use of the software by others. Server location details will be worked out during the early stages of development of the BEPD.

BEPD Project Activities in Y3Q3

During the Y3Q3 period, Winrock elaborated a detailed TOR for the software development of the BEPD (June 2015). The work will have four main phases, starting with an initial assessment of software platform's functional requirements, followed by actual software development and testing stages, and finalized by at least 6 months of continuous support to provincial DOCs for software use and data entry.

The software development is planned to start in September 2015. A fully-functional National Energy Performance Database software platform is expected to be ready by June 2016 for handling over to the Ministry of Construction and to key provincial Departments of Construction.

Several qualified Vietnamese IT firms have been identified, and a competitive selection process is under way to identify the best IT firm to implement the software development.

During Y3Q3, the project team also sought specific advice via telephone from international SEED experts at LBNL during May 2015. The Project COP also met with the USDOE and LBNL SEED managers in Berkeley in early June 2015. Both the USDOE and LBNL SEED managers expressed strong interest in and support for the use of SEED within Vietnam. It is expected from the meeting that LBNL will be available to act as an expert consultant to the BEPD development process in Vietnam. Details of that consulting arrangement will be worked out in the near future.

Component 2 (Sub-IR 2.2): Increase energy efficiency in high energy use sectors

Task 2.1.5 Achieving 50% Energy Savings from Demonstration Building

The Program has already completed its technical assistance in helping to refine the design of an 8-story training building in Hanoi. The application of recommended measures for this building could reduce the building's energy use by over 50% from the original building design.

During Y3Q3, the Project team has also identified several additional buildings as possible demonstration buildings and has been talking with their owners and designers. But closure has not yet been obtained for providing technical assistance for these buildings.

2.4.3 Refinements to Comprehensive Training Program

Continued refinements to a comprehensive training plan and program were made during the 2nd quarter of Year 3. At the very beginning of the quarter a draft comprehensive training plan was prepared for the life of the project (LOP). A first draft of this LOP Training Plan was submitted to MOC and to the USAID COR.

The training program is supporting an overall project objective to transform the building market by producing demonstration buildings that are low energy or net zero energy, and that promote a green growth action plan for the building sector.

The training program is focusing on some key training areas in support of the market transformation objective, such as:

- Integrated design to produce high performance and/or green buildings,

- Green building design and certification,
- Commissioning of buildings to ensure that planned savings actually happen,
- In-depth training in energy simulation techniques.

During the 3rd quarter of Year 3 the Program team continued to refine the overall training program. The refinements during this period focused on how to provide usable training for members of the provincial DOCs throughout the country.

2.4.4.1 Present three Workshops on Integrated Design

During the quarter, three successful workshops on integrated design were presented:

- A 2-day workshop on 31 March and 1 April 2015 hosted by the Department of Construction in Can Tho.
- A 3-day workshop on April 15-17 2015 hosted by the Department of Construction in HCMC.
- A 3-day workshop on April 21-23 2015 hosted by the Department of Construction in Danang.

2-Day Integrated Design Workshop in Can Tho:

The Program organized the course in collaboration with Can Tho Department of Construction on March 31 – April 01, 2015. The primary target audience of this training were DOC's Code officials, Engineering consultants, Architects, Practitioners & Professionals in public and private sector in designing high performance buildings, not only meet with the Code but even exceed the Code to become green buildings or buildings at 30-50% more efficient than Code requirements.

The training sought to enhance the capacity of DOCs and practitioners in public and private sector in integrated design and building simulation for high performance buildings (i.e. buildings that are 30-50% more efficient than current practice) and eventually Net zero buildings.

The statistics of the workshop participants is shown in the table below.

TRAINING PARTICIPANT STATS

Date	31/3/2015	1/4/2015
Total direct attendees	75	55
Males:	67	51
Females:	9	4
Webinar attendees	5	3
Certificates issued	63	

In this training, for the first time, the Program extended the invitation to DOC members from Can Tho and from 12 neighboring provinces in the Mekong Delta Region (Long An, Tien Giang, Vinh Long, Dong Thap, Ben Tre, Soc Trang, Tra Vinh, Ca Mau, Bac Lieu, An Giang, Kien Giang, Hau Giang). Representatives from 8 provinces attended the course.

The map below shows the locations that the Program has covered in the Mekong Delta region this time. As this area has very specific climate characteristics, the training team put a lot of effort into addressing the difference in practice for climate resilience in the training agenda and also proposed a roadmap for green growth action plan for the region.

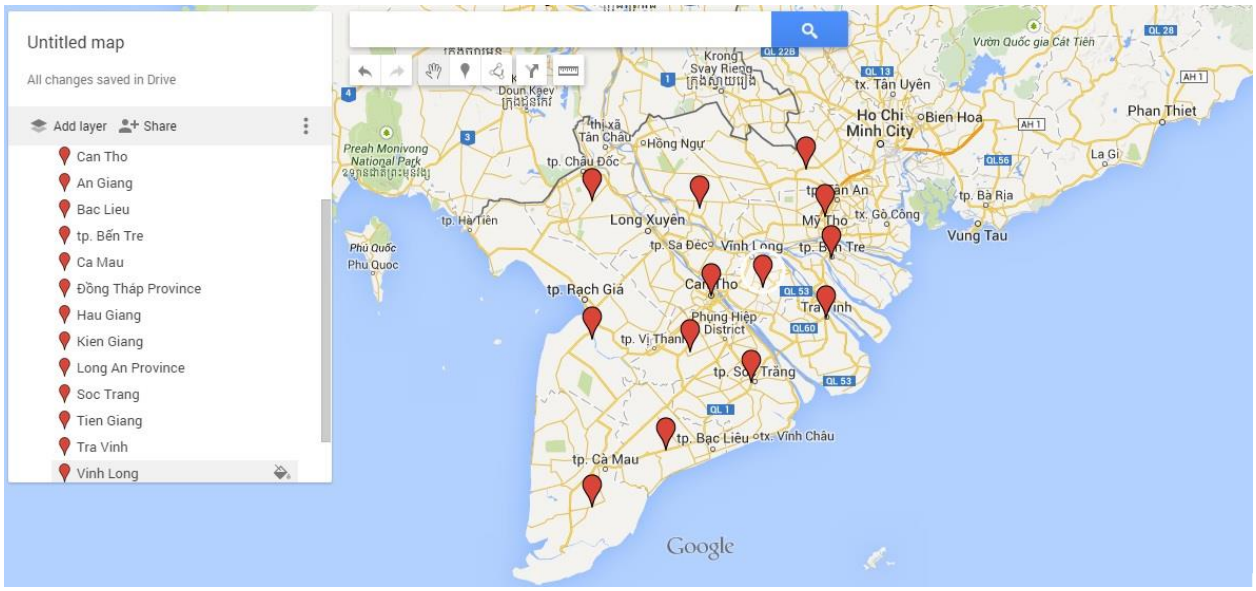


Figure 1 The USAID Vietnam Clean Energy Program training coverage - Mekong Delta Region

As usual, training materials and recordings of webinar sessions were uploaded to the Internet so that learners could have access and download for reference and self-training anytime they like. Below are the links to the materials place (including slides, videos and exercises for practice) and evaluation form for the training.

Link for downloading training materials and recordings of webinar

http://goo.gl/syk6SA

Link for evaluation of training

http://goo.gl/forms/VrExo3gDdg

The full training report for this workshop is contained in Appendix A.

3-Day Integrated Design Workshop in HCMC:

A 3-day integrated design workshop was organized and presented on 15-17 April 2015 by USAID VCEP in collaboration with the Ho Chi Minh Department of Construction. Target audiences included DOC's Code officials, engineering consultants, architects, practitioners & professionals in public and private sector. Those trainees were invited from Ho Chi Minh and also from several neighboring provinces including Binh Duong, Dong Nai, Tay Ninh, Ba Ria, Vung Tau, and Binh Phuoc.

The training sought to enhance the capacity of DOCs and practitioners in public and private sector to understand and to accomplish integrated design and building simulation for high performance

buildings (i.e. buildings that are 30-50% more efficient than current practice) and eventually Net zero buildings.

General statistics for number of attendees is shown in the table below.

TRAINING PARTICIPANT STATISTICS

Date	15/4/2015	16/4/2015	17/4/2015
Total direct attendees	74	57	53
Males:	60	43	40
Females:	14	14	13
Webinar attendees			
Certificates issued	53		

A high proportion of the attendees were practitioners in the private sector. In this training, participants were invited from Ho Chi Minh City and from 5 neighbouring provinces: Binh Duong, Tay Ninh, Dong Nai, Binh Phuoc, Ba Ria-Vung Tau. Three of the 5 provinces sent representatives to the training.

As usual, training materials and recordings of webinar sessions were uploaded to the Internet so that learners could have access and download for reference and self-training anytime they like. Below are the links to the materials place (including slides, videos and exercises for practice) and evaluation form for the training.

Link for downloading training materials and recordings of webinar:

https://goo.gl/YXRJsL

Link for evaluation of training:

http://goo.gl/forms/iJSMAQXPH8

The full training report for this workshop is contained in Appendix B.

3-Day Integrated Design Workshop in Danang:

A 3-day integrated design workshop was organized and presented on 21-23 April 2015 by USAID VCEP in collaboration with the Danang Department of Construction. Target audiences of the training included DOC's Code officials, engineering consultants, architects, practitioners & professionals in public and private sector.

This training sought to address the current needs of Department of Construction in building the capacity of their Code officials, engineering consultants, architects, M&E consultants in designing high performance buildings, not only meet with the Code but even exceed the Code to become green buildings or buildings at 30-50% more efficient than Code requirements.

TRAINING PARTICIPANT STATISTICS

Date	15/4/2015	16/4/2015	17/4/2015
Total direct attendees	99	74	69
Males:	87	66	61
Females:	12	8	8
Webinar attendees	6	11	10
Certificates issued	78		

In this training, participants came from Da Nang City and 17 neighbouring provinces including: Binh Dinh, Dak Nong, Dak Lak, Gia Lai, Lam Dong, Phu Yen, Quang Ngai, Thua Thien Hue, Quang Binh, Quang Tri, Nghe An, Binh Thuan, Ha Tinh, Quang Nam, Thanh Hoa, Khanh Hoa, Kon Tum.

Twelve out of seventeen provinces have representatives actually attended the training (including Binh Dinh, Dak Nong, Dak Lak, Gia Lai, Lam Dong, Phu Yen, Quang Ngai, Thua Thien Hue, Quang Binh, Quang Tri, Nghe An, Binh Thuan).

Training materials and recordings of webinar sessions were uploaded to the Internet so that learners could have access and download for reference and self-training anytime they like. Below are the links to the materials place (including slides, videos and exercises for practice) and evaluation form for the training.

Link for downloading training materials and recordings of webinar

https://goo.gl/rxg9Se

Link for evaluation of training

http://goo.gl/forms/CSYcIcKGnQ

The full training report for this workshop is contained in Appendix C.

The attendees provided feedback on their experience of attending the workshop. This feedback is contained in Appendix D.

2.4.4.6 Conducting a Second Study Tour to the United States

During the 3rd quarter of year 3, the Program team completed the planning for a 2nd study tour to the US. Then the study tour was conducted during June of 2015. A delegation of 7 members (5 men, 2 women) from the Ministry of Construction and related organizations went on a study tour to the U.S. They were accompanied by 2 members of the Program Hanoi office, who served as translators, as well as by the Program COP, who was in the US at that time.

The tour visited three urban areas in the US - Washington DC, Orlando in central Florida, and Los Angeles, CA. In each city the tour had a primary focus of meeting with the designers, owners, operators, and incentive providers of several very low energy, high performance green buildings. The tour also sought to establish potential partnering arrangements with major universities in the Orlando and Los Angeles areas.

In addition to visiting several high performance and green buildings, the tour met with a number of organizations:

In Washington DC:

- USAID
- American Institute of Architects (building designers, trainers)
- ASHRAE (building designers, trainers)
- USGBC (incentive providers)

In Orlando, Florida:

- Florida Solar Energy Center (FSEC) (education of professional designers)
- University of Central Florida (UCF) (education of professional designers)

In Los Angeles, California:

- University of California at Los Angeles (UCLA) (education of professional designers)
- Southern California Edison (incentive providers, trainers)

The final itinerary of the study tour, with selected photos is shown on the following pages.

Itinerary for 2nd US Study Tour, June 6-21, 2015
Washington, DC – Orlando, FL – Los Angeles, CA

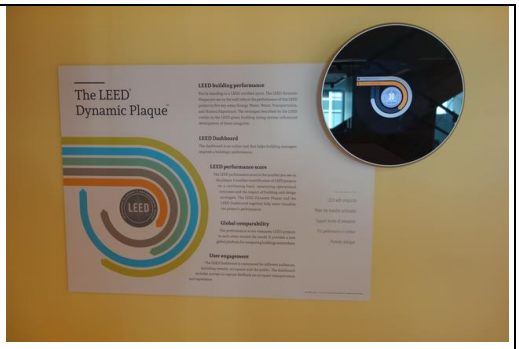
Date	Time	Activity
	14:32	**Arrive at Dulles International Airport in Washington, DC**
	16:00	**Hotel Check-In** Breakfast Hours: Monday-Friday: 6:30-9 AM; Saturday-Sunday: 7-10 AM
		Dinner
Sun, June 7		**Free Day**
Mon, June 8	08:30	**Meet bus for first meeting (in lobby)**
	09:00 – 11:30	**Meeting with U.S. Agency for International Development (USAID) and Winrock staff.** 9:00 Tour of Winrock's LEED-certified office 9:20 Intro to Winrock & Overview of its Clean Energy Work 9:40 USAID's Programs in Vietnam 10:00 Winrock's Global EC LEDS Work 10:20 Overview of the VCEP's Progress to Date 10:40 Overview of the MOC's Activities in Building EE
	12:00	**Lunch at Nha Trang**
	14:30 – 16:30	**Meeting at the General Services Administration (GSA), followed by a tour of their historic, efficient HQ.**
		Dinner
Tues, June 9	08:30	**Meet bus for first meeting (in lobby)**
	09:00 – 10:00	**Tour of the Embassy of Canada's LEED-Silver Building**
	11:00 – 12:00	**Meeting with the U.S. Department of State to hear about the work they are doing on energy efficiency and the power sector in Vietnam.**
	12:45	**Lunch at Nooshi**

	14:00 – 16:00	**Meeting with ASHRAE**
		Dinner

Date	Time	Activity
Wed, June 10	08:30	**Meet in lobby to walk to first meeting.**
	09:00 – 11:30	**Meet with the American Institute of Architects (AIA)**
	12:00	**Lunch at Mai Thai**
	14:30 – 16:30	**Visit the U.S. Green Building Council (USGBC)'s LEED Platinum HQ for a tour and meeting with Mika Kania, LEED Project Manager on the International team.**
		Dinner
Thurs, June 11	08:15	**Meet in lobby (with all bags) to leave for the airport.**
	10:15	**Depart Washington, DC for Orlando, Florida** US Airways #1880
	12:31	**Arrival in Orlando, Florida**
	13:45	**Lunch at Little Saigon**
	16:00	**Hotel Check-In** Breakfast is available daily from 6:30 AM to 10:30 AM.
		Dinner
Fri, June 12	07:45	**Meet bus for first meeting (in lobby)**
	09:00 – 12:30	**Meetings at the Florida Solar Energy Center (FSEC)** 9:00 Welcome and introductions 9:30 Current status of codes and buildings performance in Vietnam 10:00 Current status of codes and ratings in the US Software solutions: EnergyGauge & EnergyPlus 11:00 Tour of experimental facilities 11:45 Discussion of a possible partnering agreement
	12:45	**Lunch at Thai Thai Village (Cocoa, FL)**
		Meeting TBD
		Dinner
Sat, June 13		**Free Day**
Sun, June 14		**Free Day**
Date	**Time**	**Activity**
Mon, June 15	08:45	**Meet bus for first meeting (in lobby)**
	09:00 – 11:00	**Orlando Fleet & Facilities Compound** A discussion/presentation will be followed by a site visit and tour.
	12:00	**Lunch at Pho 88**
	13:00 – 15:00	**Tour of Orlando Utilities Commission (OUC) Reliable Plaza** 100 W Anderson Street, Orlando, FL 32801
	15:30 – 17:00	**Tour of LEED Gold Orange County Convention Center** Includes an overview of the energy management database and one of the largest PV arrays in Florida. 9800 International Drive (West Concourse) W220 - Boardroom
		Dinner
Tue, June 16	05:15	**Meet in lobby (with all bags) to leave for the airport.**
	07:10	**Depart Orlando, FL for Los Angeles, CA** American Airlines #1394

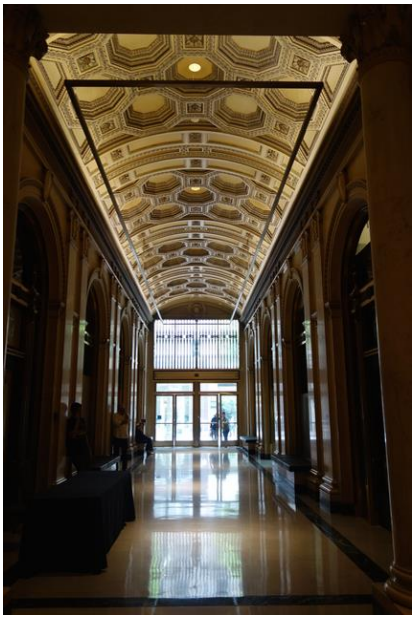
	09:15	**Arrival in Los Angeles, California**
	10:30	**Early Lunch at Kafe K**
	13:00	**Meeting & Tour of LEED Platinum PacMutual Building** 523 W 6th Street, Los Angeles, CA 90014
	14:00	**Tour of Integral Group (in PacMutual Building)** Integral Group installed the first Dynamic Plaque in L.A.
	15:00	**Hotel Check-In** Breakfast Hours: Monday-Friday: 6-11 AM; Saturday-Sunday: 7-12 AM
		Dinner
Wed, June 17	08:00	**Meet bus for first meeting (in lobby)**
	09:00 – 12:00	**Presentation from Okapi Architecture on Savings by Design incentives and visit to UCLA's Hitch Suites & Commons and Engineering 6 Phase I**
	12:30	**Lunch at Natalee Thai**
	14:00	**Additional Meetings TBD**
		Dinner
Thurs, June 18	08:15	**Meet bus for first meeting (in lobby)**
	09:00 – 10:30	**Meeting at RTKL Associates with Pablo La Roche, Professor of Architecture at Cal Poly Pomona University**
	12:00	**Lunch at Trendy Thai**
	13:00 – 15:00	**Visit Southern California Edison Energy Education Center in Irwindale, CA**
		Dinner
Date	**Time**	**Activity**
Fri, June 19		**Meet bus for meeting (in lobby)**
		Lunch
	14:00	**Tour of CBRE** (25th Floor) 400 South Hope St, Los Angeles, CA
		Dinner
Sat, June 20		**Free Day**
Sun, June 21	09:00	**Check out of hotel and meet bus for airport transfer.**
	12:00	**Depart Los Angeles, CA for Tokyo, Japan** American Airlines #0169 (LAX – Terminal 4 to NRT)
Mon, June 22	18:25 Local time	**Depart Tokyo, Japan for Hanoi, Vietnam** Japan Airlines #0751
	22:15	**Arrive in Hanoi, Vietnam**

Study Tour & Friends at Winrock Home Office



LEED Dynamic Plaque - USGBC HQ DC

Canadian Embassy energy management control system



LEED Platinum PacMutual Building

RTKL Offices in LA

Orlando Utilities Commission Building

Cross-Cutting Activities

Gender Mainstreaming

During this reporting period, the Program published its first women champion success story. An image from the online version of the story is shown below. The full story may be viewed at:

http://www.vcep.vn/en/impacts/women-champions/2015/07/81E2103C/dr-do-tu-lan-breaking-barriers-in-the-construction-industry/

Also during the quarter, a 2nd story has been drafted and the draft of the 3rd story has been started.

THE USAID VIETNAM CLEAN ENERGY PROGRAM
Energy Efficiency Promotion in the building sector

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> IMPACTS > WOMEN CHAMPIONS

Dr. Do Tu Lan: Breaking Barriers in the Construction Industry

Updated at 03 Jul 2015, 14:34

"Women shouldn't limit (themselves) or be afraid to try different things, especially in the construction indus- try. Women are gifted with thinking economically, thor- oughly, carefully and with attention to detail", said Dr. Lan

As a young girl growing up in Hanoi, Do Tu Lan showed a knack for artistic pursuits such as drawing, photography, and paper folding. She also developed an early interest in archi- tecture, and in particular, international building structures through photos that she saw in magazines that her father, who was working in the construction sector, brought home.

"As a woman, you (often) have to try twice as hard as a man. Your voice is not always heard at the first time. But (I believe) women (also) have other weapons - patience, calmness, flexibility, and a special eye for detail," she said. "I apply that to my work as a manager too. Female staff are often assigned to deal with tense situations with partners. That's my secret and so far it has always worked".

She improved her qualifications by gaining as much practical experience as she could by working on various building projects. She also enhanced her academic qualifications by obtaining a master's degree in Spatial Planning for Regions in Growing Economies, a joint program offered by Dortmund University and the Asian Institute of Technology. She later went on to obtain a PhD in 2004, with her research focusing on coastal tourist urban sustainable development in Vietnam.

With a lot of patience and perseverance, Dr. Lan rose up in the ranks and was eventually promoted to be the Vice Director of Vietnam Institute for Urban and Rural Planning at the young age of 41. She was then appointed to be the Technical Assistant to the Minister of Construction in 2013.

Planning is underway for the next two success stories of women champions. This is part of a series of success stories that highlight the accomplishments of successful women in the construction industry.

Communications

Subset of MOC Website

During previous reporting periods

During previous reporting periods, a key communications activity was the continued effort to make available key Program products on a sub-website within the MOC website. The Information Centre of the Ministry of Construction (MOC-IC) was providing input to the development of the website and will review all content and assist in maintaining the site.

A private sector company was selected to develop the site, and developed a first draft of the website, in Vietnamese.

The website was available unofficially during the 3rd quarter of Year 3

The program website is considered to be a main communication tool for the project. It has been developed in two languages: Vietnamese and English. The website was available unofficially at a temporary location during the 2nd week in June 2015, toward the end of the 3rd quarter of year 3 of the Project.

Prior to publishing it had received thorough review and feedback concerning both site format and content from:

- the Winrock home office,
- the USAID office in Hanoi, and
- MOC

In keeping with contract conditions between WI and USAID, it is a sub-website under MOC's website (http://moc.gov.vn/en/). The sub-website is now posted on MOC's website as of the writing of this report on 14 July 2015.

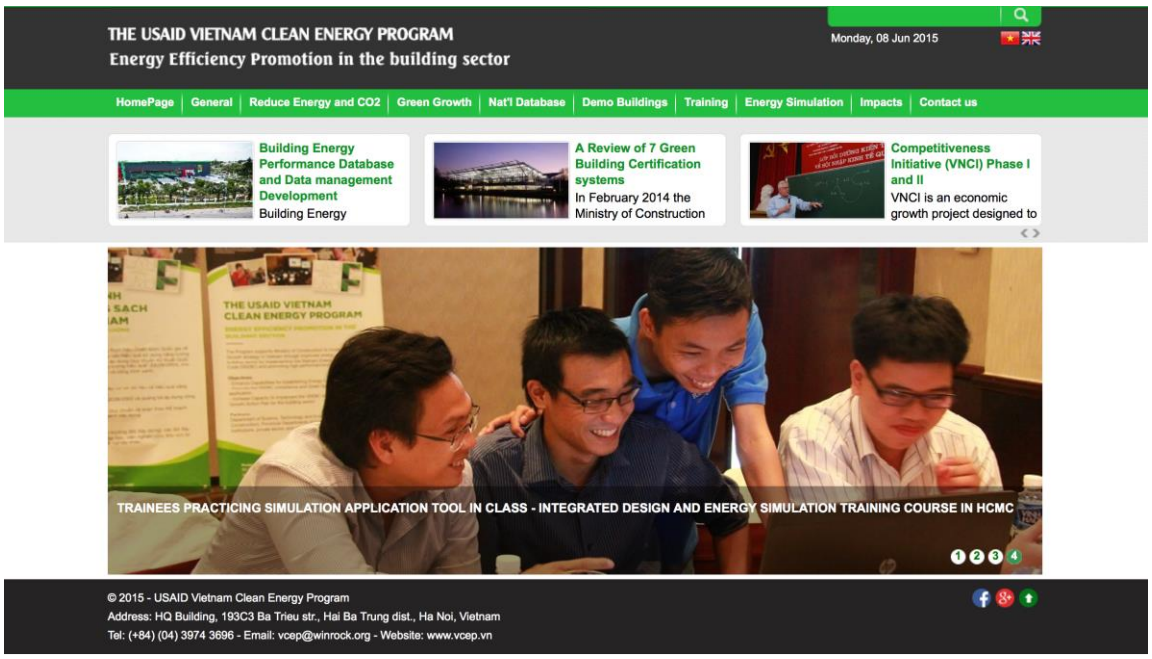
The Project-oriented sub-website is hosted at a private sector Internet Hosting provider in Vietnam and is linked to the MOC website homepage.

Two example pages from the sub-website are shown below. The first shows 4 students reviewing simulation results during a hands-on training of daylighting software. The second shows a scene from a seminar presentation.

In addition to a general introduction to the project, its impacts and products, the website consists of 6 technical main topics:

- **Reduce Energy and CO2:** Energy code, low energy/high performance buildings, net-zero building, green buildings, resilient buildings.
- **Green growth:** Policy formulation support, Green urban design, green building rating systems, green building code.
- **National Database:** Approach, building stock, national building energy performance database, online data management for the future.
- **Demo buildings:** ETC building, typical workplan for demo buildings, potential demo building.
- **Training and seminars:** Agendas of all workshops given, downloadable copies of seminar materials given to date, schedules of future workshops and seminars.
- **Energy simulation:** Typical buildings, climate data, simulation software.

As of June 30th there have been 192 visitors at the temporary website location. This number will increased when the website is posted onto MOC website, has links to the project staff's email signature, is posted on WI website and on social media, and has links to website of several related organizations in Vietnam (E4G, ITA, etc.).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Building Energy Performance Database and Data management Development
Building Energy
A Review of 7 Green Building Certification systems
In February 2014 the Ministry of Construction
Competitiveness Initiative (VNCI) Phase I and II
VNCI is an economic growth project designed to
TRAINEES PRACTICING SIMULATION APPLICATION TOOL IN CLASS - INTEGRATED DESIGN AND ENERGY SIMULATION TRAINING COURSE IN HCMC
© 2015 - USAID Vietnam Clean Energy Program
Address: HQ Building, 193C3 Ba Trieu str., Hai Ba Trung dist., Ha Noi, Vietnam
Tel: (+84) (04) 3974 3696 - Email: vcep@winrock.org - Website: www.vcep.vn


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VCEP LAUNCH IN MAY 2014
MELIA HANOI
© 2015 - USAID Vietnam Clean Energy Program
Address: HQ Building, 193C3 Ba Trieu str., Hai Ba Trung dist., Ha Noi, Vietnam
Tel: (+84) (04) 3974 3696 - Email: vcep@winrock.org - Website: www.vcep.vn

Plans for next quarter: Technical & Cross-cutting Activities

Component 1 (Sub-IR 2.1): Enhance capacity to acquire, manage, analyze and use energy sector data in decision making

Building stock data collection in Hanoi.

The Program team plans to work with the Hanoi DOC to collect data on the building stock in Hanoi, to identify the number of buildings larger than 2,500 m2 that have been constructed in the past 10 years.

Building energy performance detailed surveys

We plan to have detailed building surveys underway during the 4th quarter of Year 3 in the South (HCMC and Can Tho) and Central (Danang) climate regions using 4 organizations selected by competitive procurement.

Develop detailed specifications for the Building Energy Performance Database's online data entry interface

The Program team plans to select a qualified private sector Vietnamese IT firm via competitive procurement and to begin to work with MOC and local DOCs to develop detailed functional requirements for the planned online data entry system. During this USAID project we will concentrate on data entry by MOC and by the DOCs in the 5 major cities. It is anticipated eventually in the future, that all 63 DOCs throughout Vietnam will be able to use this online data entry system.

Web-based meetings on data collection

The Program team plans to continue to hold regular online meetings with DOC representatives, using the GoToMeeting platform.

Trainings and workshops on building energy data collection, management and use

The Program team plans to work with MOC, Enerteam and with the 4 selected data collection organizations firms, and possibly including local DOCs and ECCs to carry out a series of trainings and workshops relating to building energy database collection, management and use. One or more buildings in the South and Central regions will be used as venues for the training.

Component 2 (Sub-IR 2.2): Increase energy efficiency in high energy use sectors

Technical Support for Demonstration Buildings

The Program team plans to provide technical support to the building owner of one or more demonstration buildings. Discussions with several building owners and design teams are under way as the 4th quarter begins. The Program will continue to identify other potential demonstration

buildings and their developers and investors in several cities throughout Vietnam (Danang, Can Tho, etc.).

Develop Public-Private Partnerships

The Program has been developing several public-private partnerships with local private sector banks, building developers and owners, and has been working with several key organizations such as VCCI. One effort has been to identify funding sources for buildings that would require compliance with the Vietnam energy code and with a green building certification system recognized by MOC, including:

- "High Performance" very low energy buildings,
- Buildings that meet Green Building Certification criteria preferably at advanced certification levels.
- Net Zero Energy buildings that integrate EE and RE into advanced building designs using integrated design strategies.

Computer Simulations of Typical Buildings

The Program team plans to conduct computer simulations of one or more typical buildings at several energy performance levels provide technical support to the building owner of one or more demonstration buildings. Discussions with several building owners and design teams are under way as the 4th quarter begins.

Explore a Pilot Project for Incentives to Building Designers and Owners

The Program will explore the possibility of a pilot project with one or more buildings for which the designers and owners will receive monetary incentives for designing and constructing buildings that are demonstrated to achieve 15% - 30% more energy savings than required by the Vietnamese Energy Code. This exploration will use as models well-developed Federal- and utility-based programs from the US.

Continue to Implement the Advanced Training Program to Enable High Performance and Green Buildings

The Program team plans to work with Enerteam and a group of Vietnamese and international trainers to carry out a series of trainings and workshops relating to integrated design for high performance and green buildings, for the use of energy simulation programs, and for building energy database management. The program team plans to coordinate with a range of stakeholders including private sector architects, engineers, and building owners, as well as MOC, local DOCs and ECCs. As with past seminars, the Program team plans to continue to make the future trainings available throughout Vietnam using the GoToMeeting platform.

Cross-cutting activities

Gender

Program staff will undergo a gender sensitivity training in July to increase their awareness of gender issues and build their capacity to incorporate gender concerns across Program activities. A gender specialist will also formulate the Program's gender strategy that will serve to guide longer-term activities. The GAP will identify specific gender related issues, propose actions, formulate objectives and identify concrete activities to meet those objectives. Gender-disaggregated data-collection will

continue to be carried out. The team will also continue to craft 'success stories' featuring female champions in the construction sector.

Communications

The Program plans to have a project website (housed as a sub-website within the MOC website) developed fully functional within the next quarter. It is planned that the website will "go live" on the MOC website by the middle of July 2015.

All content will be developed by the Program team and will then be submitted to MOC and USAID for approval before it goes online.

Program Indicators for FY 2015

Table 1 below shows the Program Indictor Targets for FY 2015 by quarter, and Table 2 compares the targets for Y3Q3 with the results achieved.

Table 1: Program Indicator Targets for FY 2015, by Quarter

VCEP indicators (revised)		LOP (Revised 2015)	Baseline (As of 30Sep2014)	FY2015 Target	Q1 Target	Q2 Target	Q3 Target	Q4 Target	Sum
4.8-7	GHG emissions (metric tons of CO2 reduced)*	30,000	0	0	0	0	0	0	0
4.8.2-6	Training (Number of people receiving training)	3,000	479	1,000	200	200	300	300	1,000
	Male	*2250*	*331*	*750*	*150*	*150*	*225*	*225*	750
	Female	*750*	*148*	*250*	*50*	*50*	*75*	*75*	250
4.8.2-14	Institutions (Number with improved capacity)	30	3	10	2	2	3	3	10
4.8.2-10	Investment leveraged (US dollars)	6,000,000	0	0	0	0	0	0	0
4.8.2-31	Expected lifetime energy saving (Million kWh) *	45	0	0	0	0	0	0	0
4.8.2-28	Policies(number of policies, strategies, plans or regulations)	11	2	3	0	1	1	1	3
	At national level	*8*	*2*	*2*	*0*	*0*	*1*	*1*	2
	At sub-national level	*3*	*0*	*1*	*0*	*0*	*1*	*0*	1
GNDR-2	Proportion of female participants (%)	25%	31%	25%	25%	25%	25%	25%	25%
VCEP-1	# female champions (persons)	10	0	4	1	1	1	1	4
VCEP-2	# people accessing project tools, technologies, documents, materials	20,000	15,763	5,000	1,000	1,000	1,500	1,500	5,000

* Both indirect and direct (from demonstration buildings)

Table 2: Program Indicator Targets for Y3Q3 compared with results achieved.

No	USAID Code	Unit	LOP target	Y3 Target	Y3Q3 achievement	YTD (Y3) actual	LOP actual
	Standard indicators						
4.8-7	Greenhouse gas emissions, estimated in metric tons of carbon dioxide equivalent (CO2e), reduced and/or avoided as a result of USG assistance*	ton	30,000	0	0	0	0
4.8.2-6	Number of people receiving training in clean energy as a result of USG assistance	person	3,000	1,000	131	565	1,044
	Male	person	*2250*	*750*	110	428	759
	Female	person	*750*	*250*	21	137	285
4.8.2-14	Number of institutions with an improved capacity to address clean energy issues as a result of USG assistance		30	10	2	7	10
4.8.2-10	Amount of investment leveraged in US dollars, from private and public sources, for clean energy as a result of USG assistance	US dollars	6,000,000	0	0	0	0
4.8.2-31	Expected lifetime energy saving from energy efficiency or energy conservation as a result of USG assistance	Million kWh	45	0	0	0	0

4.8.2-28	Number of policies, strategies, plans, or regulations addressing clean energy officially proposed, adopted or revised as a result of USG assistance		11	3	0	0	2
	At national level		*8*	*2*	0	0	2
	At sub-national level		*3*	*1*	0	0	0
GNDR-2	Proportion of female participants in USG-assisted programs designed to increase access to productive economic resources (assets, credit, income or employment)	%	25%	25%	16%	*24%*	*27%*
	Customized indicators						
VCEP-1	Number of female champions in the field of energy efficient and green building promoted by the project	person	10	4	1	1	1
VCEP-2	Number of people accessing energy efficient and green building tools, technologies, and documents disseminated by the project	# of access	20,000	5,000	800	1,807	17,570